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EXAMINER

AKLILU, KIRUBEL

ART UNIT

PAPER NUMBER

2614

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/877,458

Applicant(s)

CHENG, ALEX

Examiner

Kirubel Aklilu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-10 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☒ The drawing(s) filed on 08 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Objections*

**Claim 3** is objected to because of the following informalities: The claim recites "The system for selectively connecting signal outputs from an analog and a digital converter unit wherein . . ." without reference to Claim 1. The examiner assumes this is a typographical error and the claim should recite "The system for selectively connecting signal outputs from an analog and a digital converter unit **of Claim 1** wherein". Appropriate correction is required.

**Claims 9-10** are objected to because of the following informalities: Claims 9 and 10 recite "The **system** for selectively . . ." but the claims are dependent on Claim 7, which is a method claim. The examiner believes claims 9 and 10 should read "The **method** for selectively . . ." Appropriate correction is required.

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

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applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Takano et al. (U.S. Patent # 6,731,347).

1. As for **Claim 1**, Takano et al. teach a system for selectively connecting signal outputs from an analog and a digital converter unit (see col. 2 lines 6-14 "the method includes receiving a digital signal at a digital input terminal of a device, receiving an analog signal at an analog input terminal of the device, examining whether or not the digital signal is in a usable format for the device, and selecting the digital signal if the digital signal is in the usable format, otherwise selecting the analog signal, as an input for the device.") comprising:

a switch (see fig. 3 unit 128 switch, col. 4 lines 1-3 "**a switch 128** for selecting an input terminal, and a selector 130 including a controller 140 to control the-switch 128," );

a first analog decoder having at least one output connected to an input of the switch (see fig. 1 unit 11 DSSIRD and unit 16 Analog Video/Audio, col. 3 lines 1-43 "the analog audio/video cable 16 is provided between the DSS-IRD 11 and the DTV 12, because both a digital signal and an analog signal can be provided from the DSS-IRD 11. . . In this case, signals can be transmitted to the DTV 12 in different formats.

Namely, a DSS-SD signal received at the DSS-IRD 11 is decoded into an analog signal in the DSS-IRD 11, and then the analog signal is transmitted to the DTV 12 via the

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analog video/audio cable 16.” When the DSSIRD outputs analog outputs, it is interpreted that the DSSIRD is an analog decoder with an output connected to an input of the switch);

a first digital decoder having at least one output connected to an input of the switch (see fig. 1 unit 11 DSSIRD and unit 14 IEEE1394 col. 3 lines 1-43 “the analog audio/video cable 16 is provided between the DSS-IRD 11 and the DTV 12, because both a digital signal and an analog signal can be provided from the DSS-IRD 11. . . In this case, signals can be transmitted to the DTV 12 in different formats . . . A DSS-HD signal is, meanwhile, received at the DDS-IRD 11 and is transmitted through the digital interface cable 14 to the DTV 12. The digital signal is then decoded in the DTV 12 into an analog signal. When the DSSIRD uses the IEEE1394 interface to send digital signals, it is interrupted as a digital decoder with an output connected to the switch.);

a switch controller connected to the switch (see fig. 3 unit 140 controller col. 4 lines 1-3 “a switch 128 for selecting an input terminal, and a selector 130 including a **controller 140 to control the-switch 128,**”); and

wherein the switch controller is programmed to selectively connect either the analog decoder or the digital decoder as a source of a primary switch output depending on a user specified channel selection (see col. 4 lines 32-39 “The controller 140 controls the switch 128 based upon the DTV's capability of decoding an incoming digital signal. More specifically, the controller 140 monitors the output of the HD decoder 124, and will control the switch 128 to select its first terminal "a" if the HD Decoder 124 provides an analog audio/video signal, otherwise will direct the switch 128 to select its second

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terminal "b." " And col. 4 lines 21-39 "The column "Action by User" indicates the action that a user of the system is taking. Let us assume that the user is watching a satellite TV program received at the DSS-IRD 11 on the DTV 12. The column "Signal flow" in FIG. 4 shows a signal flow from the DSS-IRD 11 to the DTV 12 and the channel through which the signal is being transmitted. Based on the IEEE1394 Standard, the digital interface cable 14 provides up to 63 isochronous digital communication channels, and allows more than two devices to communicate with each other. These channels are denoted by "CH63," "CH X" and "CH Y" in FIG. 4. Video/Audio cable 16 provides a communication channel for an analog signal. For the case of a digital signal, the channel is assigned dynamically. For the case of an analog signal, unlike the digital signal, once it is connected, there is no dynamic assignment." It is interpreted that when the user selects a channel that is analog, the controller will command the switch to accordingly to select the analog decoder and when the user selects a digital channel, the controller will instruct the switch to select the digital decoder.)

2. As for **Claim 2**, Takano et al. teach a memory associated with the switch controller which provides a correlation between user channel selection and a switch setting (see fig. 3 unit 160 Memory, col. 4 line 40 - col. 5 line 14 "Each device can have a capability list. The capability list maybe stored in a device's memory . . . In the case of DTV, since each device has a capability list, DTV can select compatible devices according to the information in their capability list. Once the device is selected, the DTV establishes an isochronous connection. Depending upon the-selected device's status, the selected

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device may output a signal onto the IEEE1394 digital interface 14 where the DTV picks up the signal. The output signal from the selected device has a field to indicate the signal format type. The format type, which may be changed dynamically, depends on the contents or situation of the device. For example, a Digital VHS can play MPEG2, DSS and analog. The DTV keeps monitoring the signal format field to determine whether to process the signal or not. This is a second stage of determination. For instance, if the signal is MPEG2, a selector 130 enables HD decoder 124 and selects switch "a" to feed the signal to a monitor 126. If the signal is analog, the selector 130 selects switch "b." If the signal is such that it is not compatible for this particular DTV, DV for example, then selector 130 may disable HD decoder 124." The channel the user selects will have a correlation with the capability list and what switch setting is selected because when a user selects a channel with DSS-SD format, the analog switch setting will be chosen and when a user selects a channel with a DSS-HD format, the digital switch setting will be chosen.)

3. As for **Claim 3**, Takano et al. teach the switch has a secondary output which is connected to either the first analog decoder or the first digital decoder depending upon whichever one is not selected as the primary switch output (see fig. 3 unit 128 switch. The figure clearly shows the switch has a secondary output which is connected either to the analog input or the digital input depending upon whichever one is not selected as the primary switch output.)

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4. As for **Claim 4**, Takano et al. teach the memory is a database (see fig. 5 and 6 col. 4 lines 57-64 "Devices may inquire into the capabilities of other devices by issuing a command on the IEEE1394 digital interface 14 to receive capability information. The queried device then responds to the inquiry command and will send the information to the device that issued the query command on the IEEE1394 digital interface 14. Two examples of a capability list are illustrated in FIGS. 5 and 6, for IRD and DTV capabilities, respectively." The entry of Figs 5 and 6 is interrupted to be a database.).

5. As for **Claim 5**, Takano et al. teach the memory is a linked list (see col. 4 lines 50-56 "Such capability information may be stored using a descriptor based upon the IEEE1394 Standard p1212r 64-bit fixed addressing. A descriptor is a leaf (**a contiguous information field pointed to by a configuration ROM directory entry**) that provides additional information to describe an object associated with a directory entry in configuration ROM" When a pointer is used to link data in different directories, the database is interpreted as a linked list.).

6. As for **Claim 6**, Takano et al. teach a method for selectively connecting signal outputs from an analog and a digital converter unit comprising the steps of (see col. 2 lines 6-14 "the method includes receiving a digital signal at a digital input terminal of a device, receiving an analog signal at an analog input terminal of the device, examining whether or not the digital signal is in a usable format for the device, and selecting the



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digital signal if the digital signal is in the usable format, otherwise selecting the analog signal, as an input for the device.”):

providing a switch having a first input or set of inputs connected to a first analog decoder and a second input or set of inputs connected to a first digital decoder (see fig. 3 unit 128 switch, col. 4 lines 1-3 “**a switch 128** for selecting an input terminal, and a selector 130 including a controller 140 to control the-switch 128,”);

providing a switch controller connected to the switch (see fig. 3 unit 140 controller col. 4 lines 1-3 “a switch 128 for selecting an input terminal, and a selector 130 including **a controller 140 to control the-switch 128,**”); and

determining a position of the switch based on a user specified channel selection (see col. 4 lines 32-39 “The controller 140 controls the switch 128 based upon the DTV's capability of decoding an incoming digital signal. More specifically, the controller 140 monitors the output of the HD decoder 124, and will control the switch 128 to select its first terminal "a" if the HD Decoder 124 provides an analog audio/video signal, otherwise will direct the switch 128 to select its second terminal "b." ” And col. 4 lines 21-39 “The column "Action by User" indicates the action that a user of the system is taking. Let us assume that the user is watching a satellite TV program received at the DSS-IRD 11 on the DTV 12. The column "Signal flow" in FIG. 4 shows a signal flow from the DSS-IRD 11 to the DTV 12 and the channel through which the signal is being transmitted. Based on the IEEE1394 Standard, the digital interface cable 14 provides up to 63 isochronous digital communication channels, and allows more than two devices to communicate with each other. These channels are denoted by "CH63," "CH

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X" and "CH Y" in FIG. 4. Video/Audio cable 16 provides a communication channel for an analog signal. For the case of a digital signal, the channel is assigned dynamically. For the case of an analog signal, unlike the digital signal, once it is connected, there is no dynamic assignment." It is interpreted that when the user selects a channel that is analog, the controller will command the switch to accordingly to select the analog decoder and when the user selects a digital channel, the controller will instruct the switch to select the digital decoder.).

7. As for **Claim 7**, Takano et al. teach a step of providing a memory associated with the switch controller, which contains information that provides a correlation between user channel selection and a switch setting (see fig. 3 unit 160 Memory, col. 4 line 40 - col. 5 line 14 "Each device can have a capability list. The capability list maybe stored in a device's memory . . . In the case of DTV, since each device has a capability list, DTV can select compatible devices according to the information in their capability list. Once the device is selected, the DTV establishes an isochronous connection. Depending upon the-selected device's status, the selected device may output a signal onto the IEEE1394 digital interface 14 where the DTV picks up the signal. The output signal from the selected device has a field to indicate the signal format type. The format type, which may be changed dynamically, depends on the contents or situation of the device. For example, a Digital VHS can play MPEG2, DSS and analog. The DTV keeps monitoring the signal format field to determine whether to process the signal or not. This is a second stage of determination. For instance, if the signal is MPEG2, a

selector 130 enables HD decoder 124 and selects switch "a" to feed the signal to a monitor 126. If the signal is analog, the selector 130 selects switch "b." If the signal is such that it is not compatible for this particular DTV, DV for example, then selector 130 may disable HD decoder 124." The channel the user selects will have a correlation with the capability list and what switch setting is selected because when a user selects a channel with DSS-SD format, the analog switch setting will be chosen and when a user selects a channel with a DSS-HD format, the digital switch setting will be chosen.).

8. As for **Claim 8**, Takano et al. teach a step of connecting a secondary output of the switch to either the first analog decoder or the first digital decoder depending upon whichever one is not selected as the primary switch output (see fig. 3 unit 128 switch. The figure clearly shows the switch has a secondary output which is connected either to the analog input or the digital input depending upon whichever one is not selected as the primary switch output.).

9. As for **Claim 9**, Takano et al. teach the memory is a database (see fig. 5 and 6 col. 4 lines 57-64 "Devices may inquire into the capabilities of other devices by issuing a command on the IEEE1394 digital interface 14 to receive capability information. The queried device then responds to the inquiry command and will send the information to the device that issued the query command on the IEEE1394 digital interface 14. Two examples of a capability list are illustrated in FIGS. 5 and 6, for IRD and DTV capabilities, respectively." The entry of Figs 5 and 6 is interrupted to be a database.).

10. As for **Claim 10**, Takano et al. teach the memory is a linked list (see col. 4 lines 50-56 "Such capability information may be stored using a descriptor based upon the IEEE1394 Standard p1212r 64-bit fixed addressing. A descriptor is a leaf (**a contiguous information field pointed to by a configuration ROM directory entry**) that provides additional information to describe an object associated with a directory entry in configuration ROM" When a pointer is used to link data in different directories, the database is interpreted as a linked list.).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- Wugofski (U.S. Patent # 6,003,041) teaches a method and system for managing multiple channel maps from multiple input devices in a multimedia system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kirubel Aklilu whose telephone number is 571-272-7342. The examiner can normally be reached on 9:00AM - 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on 571-272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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